6.0 HABITAT CONSERVATION PLAN

This section contains LIC's HCP. Implementation of this HCP will, to the maximum extent practicable, minimize and mitigate the impacts of the potential take of GCWAs associated with the Proposed Alternative. LIC has determined, through its previous surveys that no habitat for any endangered karst invertebrates is present, and through inclusion of certain BMPs as discussed in Sections 4.1 and 5.1.1.9, no impacts to any threatened or endangered Edwards Aquifer related species will occur. As such, LIC has requested the only species to be covered under the proposed permit is the GCWA.

LIC proposes that the permit issued in connection with this HCP establish a process for issuance of "Certificates of Inclusion". These certificates of inclusion would be provided to purchasers of portions of the Property upon such purchasers signing an "Agreement of Inclusion". This is further defined in Section 6.12 and the Implementing Agreement. This procedure provides a mechanism for assignment of the benefits and responsibilities of the permit and to ensure implementation of this HCP. These procedures are detailed in the Implementing Agreement.

The 846-acre Development Area of the Proposed Alternative is generally upland areas and is delineated on Figure 7. LIC and the Service have agreed that the upland area consists of varying quality GCWA habitat, while steep canyon areas are generally higher quality habitat. Previously cleared areas are not considered breeding habitat. The structural and compositional vegetative elements of the proposed development site constitute lower quality GCWA habitat than the area proposed for mitigation. Low quality habitat equates to sub-optimal vegetation for GCWA foraging, sheltering, and/or breeding. In comparison, the structural and compositional vegetative elements of the GCWA habitat in the 760 acres of the Conservation Area constitute optimal GCWA habitat as indicated by increased canopy cover, higher densities of GCWAs, and more intense GCWA utilization.

The Service and LIC are in disagreement, to a degree, over the extent of GCWA habitat on this property. LIC and their consultants, aci and Horizon, have independently estimated the total habitat on the Evans Road tract and Wolverton tract from their extensive field work over many years. After analyzing that field work, the Service interprets their results differently than both consultants. Since GCWAs often return to the same nesting territory in subsequent years, appearance of GCWAs in two different, but adjacent areas in two different years may or may not indicate those represent two distinct and separate GCWAs. Nonetheless, LIC's consultants and the Service have agreed that much of the uncleared portions of the Property is habitat for the GCWA despite their differences in analysis of the field data.

6.1 Background and Description of Project Activities

The Proposed Alternative is the result of extensive planning work and iterative processes conducted by and among consulting geologists, ornithologists, and biologists; golf course designers; environmental professionals; community and home builders of new neighborhoods in this area; local, state, and federal officials and regulators; and many neighborhood groups and special interest groups in the San Antonio area. The Proposed Alternative was chosen after reviewing the provisions of the additional, negotiated water quality safe-guards for golf areas detailed in agreements with the SAWS and the extensive biological and geological studies that

have been performed and peer-reviewed for these tracts by various professionals and firms. The work of Pape Dawson Engineering and Horizon Environmental Services, as well as that of Raba Kistner was peer reviewed by the COSA, which enlisted the aid of a noted expert in the field of Engineering Geology, Dr. Christopher Mathewson of the Geosciences Department at Texas A&M University. Upon completion of his review and on-site field work for verification, Dr. Mathewson stated the work was sound and "...of the highest professional caliber." A Geologic Arbitration Committee was then established to monitor future issues of geology, consisting of Mr. Ted Small, USGS; Mr. Edward Miller, Pape Dawson Engineers; Mr. John R. Waugh, II, SAWS; Horizon Environmental Services; aci consulting; and Pape-Dawson Engineering, Inc. and the provisions of the additional, negotiated water quality safe-guards for golf areas detailed in agreements with the SAWS.

The Proposed Alternative has been planned to provide mixed and balanced uses that may include a range of lower to middle to higher-priced housing alternatives in the form of home sites, apartment and other rental properties, and possible different housing types in the contemplated Golf Village area. Most of the community building activities will take place in areas that were ranched and cleared by others for ranching purposes in recent history. The land is characterized by poor and thin soils and re-growth of native and endemic vegetation.

The Proposed Alternative, as it is presently contemplated, has been shaped by concerns for balancing the needs of the community for more open space in an urbanized environment, for the needs of area wildlife for equal consideration and preservation of viable habitat, for the needs of local and future San Antonio residents for new housing and recreational opportunities, and the need of the Applicant for a reasonable return on investment.

6.2 Biological Goals and Objectives - Achieving Mitigation Plan Success

The biological goals of this HCP are to establish a preserve for the GCWA that will provide adequate resources to maintain a population of GCWAs, and to improve the overall biological value of these lands for the GCWA. This will be accomplished through the following objectives: (1) to minimize to the maximum extent practicable all disturbances to the GCWA and its habitat, (2) to mitigate to the maximum extent practicable impacts to the GCWA by the perpetual preservation of 760 acres of relatively higher quality GCWA habitat, the relative quality of which is in part determined by the levels of prior observed GCWA utilization, and (3) to create, enhance, maintain, and monitor the resulting GCWA preserve. The mitigation plan outlined in Section 6.5 is sufficient to achieve these biological goals and objectives. The mitigation plan is designed to ensure an adequate number of utilized GCWA habitat acres are preserved in perpetuity.

To ensure that biological goals and objectives are achieved, monitoring and maintenance actions would occur on the mitigation lands under the O&M Plan described further in Section 6.6. These actions include: monitoring for the continued presence of GCWAs within the Conservation Area; monitoring changes to GCWA habitat; and managing/manipulating habitat to maintain its suitability for GCWA habitat. Vegetation monitoring would include monitoring levels of browsing pressure and oak seedling recruitment. Revegetation required by this mitigation plan would follow disturbance by construction within the Property (See Section 6.4.2). In addition,

populations of problem animals such as deer, feral hogs, and brown-headed cowbirds would be monitored and controlled, if necessary, to prevent impacts to GCWAs and habitat.

6.3 Methodology Utilized in Determining Appropriate Mitigation

The methodology applied in this HCP to determine the appropriate mitigation to offset any incidental take of GCWAs associated with the Proposed Alternative was based on avoiding and then mitigating, to the maximum extent practicable, any remaining impacts to the GCWA. This methodology considers previously occupied GCWA habitat impacted by the Proposed Alternative and provides compensatory preservation of on-site habitat with documented GCWA territories.

Over time, the Proposed Alternative will modify significant portions of the 846 acres of varying quality GCWA habitat. The viability of the GCWA habitat within the general development areas of the Evans Road and Wolverton Tracts may or may not be impacted upon completion of Master Phase II. It is unknown whether impacts to adjacent GCWA habitat areas would occur due to the proposed development. More than ten years of study of the GCWA within and near golf course uses have indicated the continued presence of and use by the GCWA in areas adjacent to the cleared playing areas, in numbers similar to their previous numbers. In some cases greater numbers were observed post-construction than were present before construction of the golf courses, because GCWAs displaced from cleared areas colonized the adjacent areas. Therefore, areas adjacent to the proposed development may support continued presence of and use by the GCWA. Any impacts to the GCWA that may occur due to the Evans Road and Wolverton Tract development will be mitigated on-site by the preservation of 760 acres within the Evans Road, Wolverton, and North Triangle Tracts observed to support and expected to continue to support GCWAs.

Assessment of relative quality of GCWA habitat was based on a field examination of the structural and compositional vegetative elements within much of the Property as well as the results from six years of GCWA survey efforts on the Evans Road Tract portion of Master Phase II. A compilation of all available survey information since 1995 is depicted on Figure 4 (Map provided by the Service). As mentioned in Section 6.0, LIC and the Service have agreed that the upland area where the proposed development would occur consists of varying quality GCWA habitat, while the steep canyon areas are generally higher quality habitat. The structural and compositional vegetative elements of the proposed 846-acre development site constitute lower quality GCWA habitat than the area proposed for mitigation. Low quality habitat equates to suboptimal vegetation for GCWA foraging, sheltering, and/or breeding. In comparison, the structural and compositional vegetative elements of the GCWA habitat in the 760 acres of the Conservation Area constitutes optimal GCWA habitat as indicated by increased canopy cover, higher densities of GCWAs, and more intense GCWA utilization.

The 760-acre Conservation Area occurs adjacent to a 331-acre block of preserved contiguous GCWA habitat to the west, a large block of privately-owned potential GCWA habitat to the east which opens onto extensive ranch lands, and habitat to be preserved and managed in Indian Springs. Therefore, the GCWA habitat proposed as mitigation in this HCP will be a part of a larger high quality patch of GCWA habitat to remain undisturbed in perpetuity, which is described in further detail in Section 6.5. These areas are shown on Figure 11. Extensive efforts were expended in selecting appropriate mitigation lands (See Section 6.13 2b). The 760-acre

Conservation Area would be managed to preserve, maintain, and improve the existing habitat for the benefit of the GCWA under the O&M Plan described further in Section 6.6.

6.4 Proposed Permit Terms and Conditions

The following terms and conditions are proposed by the Permittee to minimize and mitigate the impacts of golden-cheeked warbler taking to the maximum extent practicable. The following are conditions that LIC proposes be included in the permit, if issued. These conditions help to further identify how LIC has minimized and mitigated impacts to the maximum extent practicable and how it will enhance the remaining golden-cheeked warbler habitat within the Property. Compliance with these measures will be documented in the annual report described below (Items s. and aa. herein below). LIC has ensured adequate funding will be made available to implement these conditions (Section 6.8).

- a. In the Development Area, LIC will minimize clearing for construction of impervious cover to the maximum extent practicable. Areas which are disturbed during construction, but are not occupied by impervious surfaces or landscaped areas will be replanted with native oaks or other native vegetation. Additionally, vegetation clearing by LIC or its assigns will be consistent with the current practices recommended by the Texas Forest Service to prevent the spread of oak wilt.
- b. Clearing activities within, or within 300 feet (91.4 meters) of golden-cheeked warbler habitat will be conducted only during the time of year when golden-cheeked warbler are not present (Aug 1 through March 1) unless a breeding season survey performed by a U.S. Fish and Wildlife Service-permitted biologist indicates that no golden-cheeked warbler are present within 300 feet (91.4 meters) of the desired activity. Construction activities within, or within 300 feet (91.4 meters) of golden-cheeked warbler habitat may be conducted during the time of year when golden-cheeked warbler are present as long as such construction follows permitted clearing, as referenced above, in a reasonably prompt and expeditious manner indicating a continuous activity.
- c. Construction period management will meet, at minimum, COSA and Texas Commission on Environmental Quality code requirements and protocols for erosion and silt control; for storage, use, and spill containment; and countermeasures for construction-related chemical and petroleum products. Construction of all wastewater pipelines will be at least as protective as current Texas Commission on Environmental Quality aquifer protection rules.
- d. If any caves or subterranean voids are encountered during construction, LIC will have qualified persons respond immediately to evaluate the void geologically and with respect to potential for endangered karst invertebrates, as it does presently, using the Permittee's protocol for such evaluations that the U.S. Fish and Wildlife Service has already approved. If endangered karst invertebrate species and/or habitat is not present, construction activity may resume immediately upon closing or filling of the void in accordance with standard practices accepted by the Texas Commission on Environmental Quality. If the feature is determined to contain endangered karst invertebrates and/or

habitat, the Permittee will immediately cease further clearing and construction activities within the area and contact the Service for further coordination.

- e. Prior to any alteration of occupied habitat or direct or indirect take, approximately 760 acres shall be set aside, preserved in perpetuity through conservation easement, and maintained as an on-site golden-cheeked warbler preserve as described throughout the HCP. This area shall be maintained, and managed in perpetuity by a conservation entity or other wildlife management entity approved by the Service.
- f. Prior to development of Master Phase II, LIC will eliminate all cattle grazing within the Conservation Area of the Property. The absence of cattle grazing in these areas would enhance the establishment and proliferation of native forbs and seedlings as well as the existing vegetation.
- g. Within the golden-cheeked warbler Conservation Area, monitoring for the presence of brown-headed cowbirds and trapping, when appropriate, is effective in reducing golden-cheeked warbler nest parasitism. Brown-headed cowbird trapping efforts will continue to be conducted according to Texas Parks and Wildlife Department guidelines and in perpetuity unless otherwise approved by the Service. At a minimum two mega-traps on the Wolverton/Evans Road conservation area and one mega-trap on the North Triangle tract will be in service at least one month prior to the GCWA breeding season (March 1), and will continue until June 1 of each year. The frequency of baiting and servicing the traps will be according to the Texas Parks and Wildlife Department guidelines, as a minimum, and will be adjusted if necessary to a higher frequency during the season. This trapping program will be implemented by qualified professionals.
- h. Deer and feral hogs often occur in greater density adjacent to suburban areas than in undeveloped areas due to greater availability of food. High densities of deer and feral hogs are known to have a long-term adverse effect on the abundance and distribution of trees, seedlings, and saplings by increasing browsing pressure (deer) and uprooting vegetation (hogs). The subsequent decrease in deciduous tree component of the wooded areas could lead to shifts in both plant and animal communities. Mitigation and open space areas within the Property will be monitored bi-annually for excessive browsing pressure, lack of oak seedling recruitment, and vegetation damage. If these disturbances are observed, LIC will ensure the management entity immediately implements appropriate techniques to remedy these damages. Such actions may include hunting, trapping, or other deer and hog population reduction programs. Deer and/or hog populations will be controlled as allowed by state game regulations and local ordinances. The Conservation Area will also be inspected bi-annually for the establishment of exotic plants, and imported fire ants. If deemed necessary, exotic plants, imported fire ants, and other exotic species affecting the golden-cheeked warbler will be treated for control as necessary. These programs will be continued in perpetuity by qualified professionals and both the need for remedial action and the actions taken or not taken will be documented in the annual report described in section s, below.
- i. Access to the Conservation Area will be limited to authorized representatives of LIC, the management entity, easement holder, the Service, and other authorized management personnel, except as otherwise authorized by LIC and the Service.

- j. LIC or its successor management entity will control the unauthorized use and trespass. Any boundary shared by the Conservation Area and on-site or off-site developed land shall be fenced with a minimum 4-foot (1.2 meter) tall, 5-strand barbed wire fence. This fencing will be installed prior to commencement of development activities within 300 feet (91.4 meters) of a preserve boundary and located at the boundary of the preserve and the development activity. Signage will be placed on the fence at 300-foot (91.4 meters) intervals to identify the area as a preserve and prohibit unauthorized entry. Such fencing will not include gates where it bounds residential areas and must be sufficient to deter unauthorized entry to the Conservation Area in perpetuity and shall be upgraded as necessary. LIC or its successor management entity shall be responsible for maintaining all fences and signage.
- k. Following installation completion of boundary fences, the use of construction equipment in the Conservation Area during the period when the golden-cheeked warbler is in the area will be limited to that authorized by the Service. However equipment and vehicles necessary to operate, repair and maintain existing water wells, fences, existing ranch and site access roads, cowbird traps, City Public Service power lines and pole installations, monitoring stations, etc., inasmuch as this activity is presently occurring on the site, is excluded from such requirement for Service authorization.
- Mountain bikes, horseback riding, livestock, cats, dogs, dumping of material (including pool water), pesticides, herbicides, fertilizers, clearing of vegetation, or anything else that is not consistent with management for the golden-cheeked warbler will be prohibited within the Conservation Area.
- m. All prospective adjacent homeowners/landowners and all construction crews will be notified of the Conservation Area entry and access restrictions identified above through placement of appropriate signage.
- n. At least three times per year, the management entity will inspect Conservation Area boundary fences for evidence of unauthorized access or vandalism and repair any damage.
- o. Presence/absence surveys for the golden-cheeked warbler will be conducted in the Conservation Area every other year for the first 10 years, then every third year for another 10 years or until 10 years after complete build-out, which ever is later. The first survey will be performed the first spring after permit issuance, with subsequent surveys to be performed as described above. At the end of 20 years, or later if build out is not completed by 2015, it is understood that LIC or its successor management entity can petition the Service, provided no substantial reduction of numbers of golden-cheeked warbler have occurred over these 20 years, to decrease the frequency of, or completely eliminate the need for additional surveys. At that time the Service will reevaluate the need for continuing these surveys and will attempt to respond to the petition within thirty days of receipt. At a minimum, these surveys will follow Service presence/absence survey protocols in effect as of the spring of 2004.

- p. LIC will develop, and residents of the proposed development will be provided with, educational materials that will encourage them to become stewards of the Conservation Area and take pride in the presence of the golden-cheeked warbler. This brochure shall provide information on the natural history of the golden-cheeked warbler, and the importance of this area to the species. The brochure will also discuss the importance of karst features for aquifer recharge. This brochure shall encourage the use of native plants for landscaping, and provide rationale for not using deer and bird seed feeders, and not allowing public access to the Conservation Area.
- q. The use of construction equipment will be limited to the Development Area as delineated on Figure 7 (Proposed Alternative Map) except as provided in k, immediately above. Contractors will avoid the Conservation Area. If any vegetation is unintentionally disturbed within the Conservation Area, LIC or its assigns will ensure that area is immediately replanted with similar native vegetation.
- r. O&M of the conservation area will be funded by LIC. Funding assurances are further described in Section 6.8. To help guide the appropriate management of this mitigation land, within twelve months of issuance of the proposed permit, LIC, in conjunction with a selected management entity, will develop a land management plan. This land management plan will be submitted for review and approval by the Service and will further address the conditions above. All operations and management will be done in perpetuity, and will be documented in the annual report described below (Item s and cc). Initially LIC will fund the management as described in 6.8.1 until the property association, or other entity approved by the Service, assumes responsibility in perpetuity which will be described and made a requirement in the recorded deed restriction to which the land will be subject.
- s. LIC or its successor management entity shall submit an Annual Report to the Service by October 1 of each year the permit is in effect. This report will include, but is not limited to the status of the development, documentation of compliance with all terms and conditions of the permit, implementation of mitigation measures, management actions taken, and golden-cheeked warbler survey results when required. Upon expiration of the permit the successor management entity will continue to provide annual reports on its management activities.
- t. Restrictive covenants making the applicable provisions of this HCP perpetual restrictions that run with the land shall be recorded in the real property records of Bexar County, Texas. For restrictive covenants applicable to this HCP, the Service shall be listed as a third party beneficiary and shall have enforcement rights, along with LIC, and the property owners association (see item r above).
- u. To help guide the appropriate management of this mitigation land, within twelve months of issuance of the proposed permit, LIC will develop a detailed land management plan for the Conservation Area in conjunction with the selected land management entity. This land management plan will be reviewed and approved by the Service and will further address the conditions described throughout the HCP.

Additionally, the Service would include the following conditions in any issued permit.

- v. The Permittee is authorized to "Take" (kill, harm, or harass) the golden-cheeked warbler on the 1,606-acre Property known as Cibolo Canyon Master Phase II, incidental to activities necessary for the construction, operation, and maintenance of a mixed-use development as described in the Permittee's application.
- w. The authorization granted by the permit is subject to full and complete compliance with, and implementation of, the terms and conditions of the Habitat Conservation Plan (HCP) and all terms and conditions contained in the permit.
- x. Upon locating a dead, injured, or sick golden-cheeked warbler, or any other endangered or threatened species, the Permittee is required to contact the U.S. Fish and Wildlife Service's Law Enforcement Office, in Austin, (512) 490-0948, or San Antonio (210) 681-8419, Texas for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological material in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species or preservation of biological materials from a dead specimen, the Permittee and its contractor/subcontractor have the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
- y. Conditions of the Permit shall be binding on, and for the benefit of, the Permittee and its respective successors and assigns. If the permit requires an amendment because of change of ownership, the Service will process that amendment without the requirement of the Permittee preparing any new documents or providing any mitigation over and above that required in the original permit. A "Certificate of Inclusion" procedure to address the relative rights and responsibilities of a succession of multiple owners within this master-planned project will be used in connection with the permit requested for Cibolo Canyon Property (See Section 6.12. The construction activities proposed or in progress under an original permit may not be interrupted provided the required special conditions of an issued permit are being followed.
- z. If during the tenure of the Permit the project design and/or the extent of the habitat impact described in the habitat conservation plan is altered, such that there may be an increase in the anticipated take of the golden-cheeked warbler, the Permittee is required to contact the Service and obtain authorization and/or amendment of the Permit before commencing any construction or other activities that might result in take beyond that described in the EA/HCP. It is acknowledged, however, that all suitable golden-cheeked warbler habitat within the Evans Tract and the Wolverton Tract not designated as golden-cheeked warbler preserve is considered impacted by the authorized action, along with prior actions by others in some cases, such that land plan modifications within the 'development' areas of Master Phase II including any areas that are possible golf development areas should not result in increased take of the golden-cheeked warbler.
- aa. The Permit shall be recorded with the County Clerk, Bexar County, Texas, prior to the beginning of development related activities on the Property.

- bb. Upon prior written notification to the Permittee, the Service will be allowed access to the Property, accompanied by representatives of the Permittee or its successors or assigns, to inspect the condition of the golden-cheeked warbler habitat and to ensure that the HCP is being implemented according to its terms for the benefit of the listed species. In the event that the Service finds that the HCP is not being implemented according to its terms, the Service has the option, as a last resort, of terminating and revoking the permit. Prior to revocation, the Service will exercise all possible measures to remedy the situation.
- cc. Written annual reports of the year's activities, including presence/absence surveys for the golden-cheeked warbler, compliance with all of the terms and conditions described above, and status of clearing and construction will be submitted by October 1 of each year to the USFWS Field Office 10711 Burnet, Suite 200, Austin, Texas 78758; and to the USFWS, P.O. Box 1306, Room 4102, Albuquerque, NM 87103.
- dd. The current "No Surprises" policy of the Service provides that additional mitigation requirements for land, water, or financial obligations shall not be required of the Permittee or its successors or assigns beyond the level of mitigation provided for in the Permit and the HCP if fully and completely complied with and implemented. With respect to the Permit, the HCP and supporting documents adequately addressed the federally listed golden-cheeked warbler.

6.5 Mitigation Plan

The proposed development provides 760 acres to be preserved and managed for the GCWA in perpetuity. Much of this area occurs adjacent to a 331 acre block of contiguous GCWA habitat that has been preserved for the GCWA in perpetuity by the landowners to the west (Figure 11). The proposed preserve system is also adjacent to an even larger block of privately owned potential GCWA habitat to the east, which opens onto extensive ranch lands. Therefore, the GCWA habitat proposed as mitigation in this HCP will be a part of a larger high quality patch of GCWA habitat to remain undisturbed in perpetuity. The GCWA habitat proposed as mitigation in this HCP combined with the adjacent GCWA habitat to be preserved and managed in Indian Springs totals approximately 1,091 acres (441.5 hectares) and the habitat value of the two pieces being preserved together is enhanced – the sum being of greater habitat value than either piece standing alone and fragmented.

Over time, the viability of GCWA habitat on the development portion of the Property that has not already been cleared of juniper by others will be significantly diminished. Therefore, in addition to minimization efforts, an appropriate mitigation and O&M plan will be implemented. To mitigate for potential disturbance to GCWA habitat in the development areas on the Evans Road and Wolverton Tract portions of the Property, the conditions above would be included in the proposed section 10(a)(1)(B) permit.

6.6 O&M of the Mitigation Lands

O&M of the conservation area will be funded by LIC. Funding assurances are further described in Section 6.8. All operations and management will be done in perpetuity and will be documented in the annual report described in sections s and cc, above. O&M may be conducted by a conservation easement holder such as Bexar County Land Trust, by a Service approved entity under contract with the property owners association such as the Indian Springs Conservation Association, inc., or another entity acceptable to the Service.

6.7 Adaptive Management

If, during surveys/site inspections by the Applicant and/or its designated representatives or conservation easement holders, during Service review of reports, or reports by a third party, a determination is made by the Service that the goals or management objectives of this HCP are not being met, if the Property undergoes changed circumstances, or management and/or monitoring activity is determined not to be effective in conserving GCWA, then adjustments to the management program may be warranted. Adjustments will be made within a reasonable time in consultation with the Service. Adaptive management actions will be funded only to the extent of the O&M budget, a portion of which is budgeted for contingency funding and may require reallocation of O&M funds as necessary (See Section 6.8.1).

Examples of changed circumstances that may occur sometime in the future include, but are not limited to:

- A cave is encountered during construction containing listed karst invertebrates
 - See Section 6.4d
- Oak wilt occurs in the preserve or development
 - Treat according to current recommendations by Texas Forest Service (See Section 6.4a)
- Wildfire occurs in the preserve or development
 - The management entity will assign a professional qualified to assess impacts to GCWA habitat and potential benefits of wildfire to make a recommendation (containment or extinguish). Additionally, the management entity will coordinate annually with the local fire department to keep them informed of preserve access points, existing roads, fire threat conditions, and any other relevant information.

Adaptive management options to be considered may include, but are not limited to:

- The modification of established hunting, trapping, or other deer and feral hog reduction programs to prevent intensive grazing which may prevent the establishment of hardwood seedlings.
- Control of brown-headed cowbirds to reduce the potential for GCWA nest parasitism.
- Installation of additional fencing or other barriers, if required, between developed areas
 and the Conservation Area to prevent deleterious impacts from the developed areas
 and/or trespassing.

 Prescribed burning or thinning used to control dense stands of juniper, reduce fuel accumulation, and to promote hardwood regeneration.

6.8 Funding and O&M Budget

Conservation planning requires sufficient funding be made available to implement the EA/HCP. LIC or its successor management entity will provide such funds as may be necessary to carry out its obligations under the EA/HCP as they are needed. As described below, the Applicant has committed to provide funding adequate to cover expected O&M costs and to secure this funding through provision of an appropriate surety bond, letter of credit, or other acceptable financial mechanism. Initially, LIC will provide funding and this will be guaranteed by LIC until such time as the property owners association assumes responsibility for O&M and funding for the those activities. The property owners association, through recorded deed restrictions, will have the responsibility for O&M of the Conservation Area and the authority to levy annual assessments for funding in perpetuity. LIC or its successor management entity will notify the Service if LIC's, or its successor management entity's funding resources have materially changed, including a discussion of the nature of the change. The budget provided below is a preliminary attempt to estimate costs associated with managing the conservation area. The final budget will ultimately be negotiated between LIC and the management entity and could vary from that provided below. The Service will review and approve the final budget.

6.8.1 O&M Budget

The estimated budget for O&M of the 760 acre-Preserve includes among other things GCWA surveys, GCWA habitat monitoring and maintenance, and animal control for the next 20 years. However, LIC recognizes O&M responsibility is required in perpetuity and is provided for in the associated funding mechanism as described elsewhere herein.

The budget for accomplishment of periodic GCWA surveys and annual habitat monitoring by a management entity in the Preserve has been developed based upon the experience of the project consultants and professionals, and the scopes of work and associated costs with other GCWA preserve operating and maintenance efforts in central Texas. It also considered the current costs associated with BHC trapping, and habitat conservation and maintenance costs for the Property at present. This total figure varies from year to year, but includes \$23,000 per year for GCWA surveys in those years surveys will be conducted, and from 10,000 to \$20,000 per year for habitat monitoring and maintenance activities. The total for the twenty-year period of the budget is approximately \$2,000,000 which includes a 4 percent per annum inflation factor for costs.

LIC will provide a surety bond or a letter of credit to cover all O&M costs for the first five years. This will be provided to the management entity through a surety insurer in the same manner and with the same institution (or with an equivalently sound surety insurer company) that presently provides financial performance guarantees on behalf of LIC to the COSA for the overall project. It is expected this development will be substantially completed within the first five years. The property owner's association will be established and funded within these five years, after which the financial responsibility for the annual expenditure will be assigned to and become the responsibility of the association. The Deed restrictions will provide for a graduated initial

payment to be collected from property owners to establish an adequate reserve, and for the ability to the association to levy annual assessments to meet its needs for operating capital for this and other O&M purposes within the community. The detailed annual figures for the budget are included on the following page herewith and have been reviewed by the Service and the selected management entity.

6.9 Unforeseen Events

6.9.1 No Surprises Assurances

The "Covered Species" listed below is considered adequately addressed under the HCP and is, therefore, covered by Service's No Surprises policy assurances. In the event that it is demonstrated by the Service that Unforeseen Circumstances exist during the life of the Permit, and additional conservation and mitigation measures are deemed necessary to respond to Unforeseen Circumstances, the Service may require additional measures of Applicant where the HCP is being properly implemented, but only if such measures are limited to modifications within the HCP or related permit documents for the Covered Species, and maintain the original terms of the HCP to the maximum extent possible. Notwithstanding the foregoing, the Service shall not:

- i) Require the commitment of additional land, water or financial compensation by the Applicant without the consent of the Applicant; or
- ii) Impose additional restrictions on the use of land, water, or natural resources otherwise available for use by Applicant under the original terms of the HCP, including additional restrictions on covered actions included under the HCP.

6.9.2 Effect of Unforeseen Circumstances on Permit

Except as provided above, notwithstanding the occurrence of Unforeseen Circumstances, as long as the Applicant continues to properly implement the provisions of the HCP and any additional measures required by the Service in accordance with section 6.9.1 hereof, the Permit will remain in full force and effect.

6.9.3 Notice of Unforeseen Circumstances

The Service shall notify the Applicant in writing of any Unforeseen Circumstances of which the Service becomes aware that may affect the obligations of the Applicant under the Permit or the HCP.

Tentative Cost Estimate (20 year timeline)

	1							2					3					4			5					
Year	PE	PM	SrS	Tota		PE	РМ	SrS	Tota	al	PE	PM	SrS	Tota	al	PE	PM	SrS	Total		PE	РМ	SrS	Tota	I	
GCW Surveys	0	40	240	\$	23,000.00						0	40	240	\$	24,876.80						0	40	240	\$	26,906.75	
Habitat Monitoring (as needed)	8	96	64	\$	15,320.00	8	64	32	\$	9,720.00	8	64	32	\$	10,108.80	8	64	32	\$	10,513.15	8	64	32	\$	10,933.68	
Problem Animal Control (as needed)	4	64	64	\$	4,402.50	4	64	64	\$	4,578.60	4	64	64	\$	4,761.74	4	64	64	\$	4,952.21	4	64	64	\$	5,150.30	
Fencing around Preserve	0	0		\$	100,000.00	0	0		\$	5,000.00	0	0		\$	5,200.00	0	0		\$	5,408.00	0	0		\$	5,624.32	
Signage	0	0	6	\$	1,250.00	0	0	0	\$	-	0	0	4	\$	200.00	0	0	4	\$	208.00	0	0	4	\$	216.32	
Operation and Maintenance Plan Prep	24	88	24	\$	13,520.00	0	0	0	\$	-	0	16	8	\$	2,160.00	0	16	8	\$	2,246.40	0	16	8	\$	2,336.26	
Resident Education	4	8	40	\$	4,500.00	0	4	20	\$	1,980.00	0	4	20	\$	2,059.20	0	4	20	\$	2,141.57	0	4	20	\$	2,227.23	
Adaptive Management (as needed)	0	0	0	\$	-	0	0	0	\$	-	16	32	32	\$	8,393.22	0	0	0	\$	-	0	0	0	\$	-	
Contingency Fund											80	80	80	\$	26,823.68											
Administrative Costs				\$	40,000.00				\$	8,000.00				\$	8,652.80				\$	8,998.91				\$	9,358.87	
Easement Provision Enforcement										, and the second	200			\$	29,203.20										, and the second	
TOTAL	40	296	438	\$	102,472.50	12	132	116	\$	24,278.60	308	300	480	\$	117,559.44	12	148	128	\$	29,380.25	12	188	368	\$	57,449.40	

			(6				7			8							9			10					
Year	PE	PM	SrS	Total		PE	РМ	SrS	Tota	al	PE	PM	SrS	Tota	ıl	PE	PM	SrS	Total		PE	PM	SrS	Total		
GCW Surveys						0	40	240	\$	29,102.34						0	40	240	\$	31,477.09						
Habitat Monitoring (perserve only)	8	64	32	\$	11,371.03	8	64	32	\$	11,825.87	8	64	32	\$	12,298.90	8	64	32	\$	12,790.86	8	64	32	\$	13,302.49	
Problem Animal Control (as needed)	4	64	64	\$	5,356.31	4	64	64	\$	5,570.57	4	64	64	\$	5,793.39	4	64	64	\$	6,025.13	4	64	64	\$	6,266.13	
Fencing around Preserve	0	0		\$	5,849.29	0	0		\$	6,083.26	0	0		\$	6,326.60	0	0		\$	6,579.66	0	0		\$	6,842.85	
Signage	0	0	4	\$	224.97	0	0	4	\$	224.97	0	0	4	\$	233.97	0	0	4	\$	243.33	0	0	4	\$	253.06	
Operation and Maintenance Plan Prep	0	16	8	\$	2,429.71	0	16	8	\$	2,429.71	0	16	8	\$	2,526.89	0	16	8	\$	2,627.97	0	16	8	\$	2,733.09	
Resident Education	0	4	20	\$	2,316.32	0	4	20	\$	2,408.97	0	4	20	\$	2,505.33	0	4	20	\$	2,605.54	0	4	20	\$	2,709.77	
Adaptive Management (as needed)	16	32	32	\$	9,441.23	0	0	0			0	0	0	\$	-	16	0	32	\$	10,620.10						
Contingency Fund	80	80	80	\$	30,172.99											80	80	80	\$	33,940.51						
Administrative Costs				\$	48,666.12				\$	10,122.55				\$	10,527.45				\$	10,948.55				\$	11,386.49	
Easement Provision Enforcement	200			\$	32,849.63											200			\$	36,951.36						
TOTAL	308	260	240	\$	143,148.31	12	188	368	\$	62,004.97	12	148	128	\$	34,205.94	308	268	480	\$	148,550.45	12	148	128	\$	36,971.04	

			1	1				12	2				13					14	1		15					
Year	PE	PM	SrS	Total		PE	РМ	SrS	Total		PE	PM	SrS	Tota	al	PE	PM	SrS	Total		PE	PM	SrS	Tota		
GCW Surveys	0	40	240	\$ 34,	,045.62						0	40	240	\$	36,823.74						0	40	240	\$	39,828.56	
Habitat Monitoring (perserve only)	8	64	32	\$ 13,	,834.59	8	64	32	\$ 1	14,387.97	8	64	32	\$	14,963.49	8	64	32	\$	15,562.03	8	64	32	\$	16,184.51	
Problem Animal Control (as needed)	4	64	64	\$ 6,	,516.78	4	64	64	\$	6,777.45	4	64	64	\$	7,048.54	4	64	64	\$	7,330.49	4	64	64	\$	7,623.71	
Fencing around Preserve	0	0		\$ 7,	,116.56	0	0		\$	7,401.22	0	0		\$	7,697.27	0	0		\$	8,005.16	0	0		\$	8,325.37	
Signage	0	0	4	\$	263.19	0	0	4	\$	273.71	0	0	4	\$	284.66	0	0	4	\$	296.05	0	0	4	\$	307.89	
Operation and Maintenance Plan Prep	0	16	8	\$ 2,	,842.41	0	16	8	\$	2,956.11	0	16	8	\$	3,074.35	0	16	8	\$	3,197.33	0	16	8	\$	3,325.22	
Resident Education	0	4	20	\$ 2,	,818.16	0	4	20	\$	2,930.88	0	4	20	\$	3,048.12	0	4	20	\$	3,170.04	0	4	20	\$	3,296.85	
Adaptive Management (as needed)				\$	-	16	32	32	\$ 1	11,946.17				\$	-	0	0	0	\$	-	16	32	32	\$	13,437.82	
Contingency Fund						80	80	80	\$ 3	38,178.46											80	80	80	\$	42,945.58	
Administrative Costs				\$ 59,	,209.77				\$ 1	12,315.63				\$	12,808.26				\$	13,320.59				\$	13,853.41	
Easement Provision Enforcement						200			\$ 4	41,565.26											200			\$	46,755.26	
TOTAL	12	188	368	\$ 119,	,850.51	308	260	240	\$ 13	31,651.65	12	188	368	\$	78,371.17	12	148	128	\$	43,196.53	308	300	480	\$	187,878.80	

			1	16				17	7				18	3				1	9		20					
Year	PE	PM	SrS	Total		PE	РМ	SrS	Tot	tal	PE	PM	SrS	Tot	al	PE	PM	SrS	Total		PE	PM	SrS	Tota	ıl	
GCW Surveys						0	40	240	\$	43,078.57						0	40	240	\$	46,593.78						
Habitat Monitoring (perserve only)	8	64	32	\$ 1	16,831.90	8	64	32	\$	17,505.17	8	64	32	\$	18,205.38	8	64	32	\$	18,933.59	8	64	32	\$	19,690.94	
Problem Animal Control (as needed)	4	64	64	\$	7,928.65	4	64	64	\$	8,245.80	4	64	64	\$	8,575.63	4	64	64	\$	8,918.66	4	64	64	\$	9,275.40	
Fencing around Preserve	0	0		\$	8,658.38	0	0		\$	9,004.72	0	0		\$	9,364.91	0	0		\$	9,739.50	0	0		\$	10,129.08	
Signage	0	0	4	\$	320.21	0	0	4	\$	333.01	0	0	4	\$	346.34	0	0	4	\$	360.19	0	0	4	\$	374.60	
Operation and Maintenance Plan Prep	0	16	8	\$	3,458.23	0	16	8	\$	3,596.56	0	16	8	\$	3,740.42	0	16	8	\$	3,890.04	0	16	8	\$	4,045.64	
Resident Education	0	4	20	\$	3,428.72	0	4	20	\$	3,565.87	0	4	20	\$	3,708.50	0	4	20	\$	3,856.84	0	4	20	\$	4,011.12	
Adaptive Management (as needed)				\$	-				\$	-	16	32	32	\$	15,115.72	0	0	0	\$	-						
Contingency Fund									Π		80	80	80	\$	48,307.93											
Administrative Costs	80	260	520	\$ 7	72,037.74	80	260	520	\$	74,919.25	80	260	520	\$	77,916.02	80	260	520	\$	81,032.66	80	260	520	\$	84,273.97	
Easement Provision Enforcement											200			\$	52,593.31											
TOTAL	92	408	648	\$ 10	04.325.44	92	448	888	\$	151.564.23	388	520	760	s	228.829.25	92	448	888	s	163.905.76	92	408	648	\$	121.991.66	

Grand Total \$ 2,087,585.91

Rates

PE \$ 135.00 per hour PM \$ 95.00 per hour SrS \$ 80.00 per hour

Inflation rate 4% per year

6.9.4 Covered Species

Species adequately covered under the HCP:

Golden-cheeked warbler Order: Passeriformes

Family: Emberizidae (sub family: Parulidae)

Genus: Dendroica

Species: chrysoparia"

6.10 Certificates of Inclusion

The Property to be covered by this EA/HCP is part of a proposed master planned development that will include a variety of components to be developed and occupied over time by a variety of parties. Assuring that the various owners and developers of different components of the project benefit from and are bound by the proposed ESA section 10(a)(1)(B) permit and that a single party maintains the overall monitoring and reporting requirements has proven very complex in similar circumstances. Recently, the Service and certain Applicants have developed a "Certificate of Inclusion" procedure to address the relative rights and responsibilities of a succession of multiple owners within a master-planned project. The Applicant proposes that such a procedure will be used in connection with the permit requested for Cibolo Canyon. In that connection, the Implementing Agreement (Appendix A) for the permit will include specific provisions describing the Certificate of Inclusion process and will attach templates for Agreements of Inclusion to be signed by, and Certificates of Inclusion to be issued to, parties who acquire certain portions of the project for development and/or use and enjoyment.

6.11 Compliance With Section 10(a)(1)(B) Permit Issuance Criteria

As required by Section 10(a)(2)(B) of the ESA, the Service, as the designee of the Secretary of the Interior, must issue a requested Section 10(a)(1)(B) permit if the Service finds: 1) the taking will be incidental; 2) the Applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; 3) the Applicant will ensure that adequate funding for the plan will be provided; 4) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and 5) the Applicant includes in its HCP such measures that the Service requires as being necessary or appropriate for purposes of the plan. This HCP meets each of these five criteria:

1. The proposed taking will be incidental. The Applicant desires to develop the Property because of its location and desirable physical attributes for the intended end use as described in this HCP. Any possible take of GCWAs will be incidental to, and not the purpose of, the otherwise lawful activity described in this HCP.

- 2. <u>Impacts of the anticipated take will be minimized and mitigated to the maximum extent practicable</u>. The Service's HCP handbook explains that this finding typically requires consideration of two factors: adequacy of minimization and mitigation program, and whether it is the maximum that can be practically implemented by the Applicant. To the extent that the minimization and mitigation program can be demonstrated to provide substantial benefits to the species, less emphasis can be placed on the second factor. See Service's HCP Handbook at 7-3 to 7-4.
 - a. The minimization and mitigation program provides substantial benefits to the species. The minimization and mitigation program consists of measures that reduce or offset potential adverse effects to the covered species in this HCP as a result of the construction of the Proposed Alternative. Species conservation efforts include, but are not limited to: seasonal restrictions and oak wilt prevention applied to all clearing activities, restoration of temporarily disturbed vegetation, habitat enhancement, a measurable and enforceable monitoring program, enforceable by the Service, adaptive management linked to the monitoring program, and the preservation and management of 760 total acres of GCWA habitat (See Section 6.2). This area has been observed to support at least 12 GCWA territories on the North Triangle, Evans, and Wolverton Tracts. Preservation and management of this area would make it possible to implement the first steps toward the creation of an important new third GCWA preserve in the Cibolo Canyon area. This may have significant benefits towards achieving recovery of the species. Moreover, habitat areas that will be affected under this HCP are of lower quality than those that will be preserved and managed in perpetuity for the benefit of the GCWA. The minimization and mitigation included in the HCP is sufficient to fully offset and compensate for the requested impacts. Moreover, due to the seasonal restriction on clearing activities and the preservation of large areas of contiguous habitat under the HCP, the Applicant believes that the action may not even rise to the level of "take" of individual members of the species. All habitats will be modified while the GCWA is in its wintering range in Mexico and Central America. LIC believes there is little evidence that such habitat modification or loss will actually result in death or injury to GCWA upon their return. No study has shown that GCWA do not readily adjust to this circumstance and locate other suitable habitat. Nonetheless, because it is possible that the action could rise to the level of "take" of GCWA, and because the action may affect the species more generally through a reduction in total acres of suitable habitat, the Applicant has proposed this HCP and sought a permit so that all potential impacts will have been analyzed and authorized.
 - b. The minimization and mitigation program is the maximum that can practicably be implemented by the Applicant. The minimization and mitigation program is demonstrably adequate to offset the impacts of the action and is, in fact, beneficial to the species; therefore, less emphasis need be placed on the question of practicability. Nevertheless, the minimization and mitigation program is the maximum that can practicably be implemented by the Applicant. Development lines have been pulled back to avoid impacts to optimal GCWA habitat; the majority of the development would occur in non- or low quality GCWA habitat.

Early in the environmental planning for the project, with the fore-knowledge of the use of portions of the Evans Road Tract by the GCWA, the Applicant looked at alternative plans

for use of the land, some of which are fully described and discussed in this EA/HCP. With experienced ornithologists and biologists evaluating the vegetative character of the site, and with significant past experience with Service biologists and permit criteria, LIC's representatives spent months looking at other sites for off-site mitigation options that LIC's consultants advised were adequate for possible and probable scenarios of `take' and mitigation requirements. The Wolverton Tract was evaluated for habitat before it was purchased and was found to have recently been partially cleared of ash juniper. However, the dendritic canyon areas were only partially cleared; leaving the more diverse vegetative complex in canyons. These areas have attracted GCWAs. This fact guided the avoidance strategy in the land planning on the Wolverton Tract.

LIC also vigorously pursued several possible off-site mitigation scenarios. LIC entered into contracts to purchase three other parcels for use in different development scenarios and on which to establish a GCWA mitigation bank for its future use - among them the Reeh Ranch to the east of the project and portions of the Gallagher Ranch in the far northwest quadrant of San Antonio. During that period of a year or so, LIC representatives worked with The Nature Conservancy and met with representatives of the Service, meeting both on the various tracts being considered and at the offices of the Service in Austin, to obtain their opinion and receive their guidance regarding the suitability of each tract for GCWA mitigation.

LIC acquired one of the parcels closest to the project site, the North Triangle Tract after the Service advised that a different potential mitigation tract, the several thousand acre Gallagher Ranch in west-northwest Bexar County, did not contain enough high quality vegetation to serve as a habitat mitigation bank for the GCWA and was too far from the project area. Proximity of the conservation area to the site of incidental take was said, by Service representatives to be of highest importance. The North Triangle Tract had favorable attributes, whether gauged by quality of vegetative components or by number of GCWAs expected to be located on the property, which has proven to be correct, and it was in closest proximity to the project. In addition, it is part of a larger block of higher quality habitat that, due to various development constraints, including topography and floodplain, is likely to remain undeveloped, if not eventually specifically managed for the species.

Another large ranch property, again in west northwest Bexar County was dropped from consideration after an environmental buyer (The Nature Conservancy) acquired an option on it, and a third was dropped from consideration due to the fractiousness and complexity of its ownership along with its distance from the project. Further, efforts at off-site mitigation by acquisition of mitigation land, especially a large tract of land in proximity to the project site and of high habitat quality (such as the Reeh Ranch), added to costs of community development to such a degree that several of the alternatives became very difficult to pursue, financially. In this process, it became clear to LIC that acquiring an off-site mitigation bank combined with the front end carried costs of bringing utility commitments to a property and securing its entitlements had become prohibitive and no longer practicable in this instance in their combination.

At this point, LIC turned to an on-site mitigation strategy for its close proximity, scaling back its community plan area and utilizing portions of the North Triangle Tract, the Wolverton Tract, and Evans Road Tracts for habitat preservation and green space, and for preservation of existing territory through on-site mitigation. This on-site, same area mitigation strategy has been supported by the Service as biologically preferable after a review by all of its local GCWA experts. This is because the on-site preservation, together with adjacent preservation via a recent agreement between the service and another landowner, create a critical first step towards preserving a large, contiguous block of habitat in this area of Bexar County.

In considering all of the individual mitigation sites listed above, off-site and on, LIC used its experience and that of its consulting team to evaluate both the vegetative make-up and the presence or absence (if known) of GCWAs and other components of each site being considered and ranked the individual contribution of those elements in an informal scoring methodology. In the case of applying that information to each alternative considered, LIC used a second informal scoring methodology to assign or correlate relative value against relative need among the several alternative land use plans that were emerging as the preferable alternatives.

In the end, when assigning an amount of relative `take' or `harm' to either a member or members of the species itself, and then to `habitat' of the GCWA (based on other past and current work with the Service 10(a) permitting staff and the outcomes of those permit discussions), the differences in impacts to either species or habitat that would be attributable to any of the top six or seven plans, including the "No Action" Alternative was finally very similar for several reasons.

- On April 22, 2003, Service biologists conducted a site visit of the proposed Phase I development site. This site visit assisted the Service in writing a letter on July 3, 2003, stating that there is no information that indicates that the GCWA is present within the Master Phase I area. This focused attention on Master Phase II of the Cibolo Canyon Property and LIC voluntarily entered into this Permit and habitat conservation planning process for Master Phase II.
- The project site is an in-fill project; much of the surrounding area and even portions of the project site itself has been fragmented, disturbed, is in present agricultural use for cattle-raising and game management, or is already subdivided.
- The high quality, contiguous habitat in the area is comprised of the Indian Springs conservation area, the areas proposed for preservation under this HCP, and other areas trending towards the east, northeast.
- Much of the Property is best characterized as habitat that is of relatively low quality.
 The quality of the GCWA habitat on the majority of the Property, excluding the
 North Triangle and areas proposed to be set aside within Evans and Wolverton, is of
 lower quality considering its age, canopy and physical make-up.

The strategy described in the HCP is an aggressive financial commitment by LIC, presently amounting to some 4 million dollars in actual costs, substantial additional intangible costs to the project, and the value of the proposed mitigation land which conservatively exceeds \$3.5 million. Further expenditures on minimization and mitigation measures would be substantially disproportional to any benefits conferred to the species in this location, as well as being substantially detrimental to the financial viability of the project.

3. Adequate funding for the plan will be provided.

LIC or its successor management entity will provide such funds as may be necessary to carry out its obligations under the EA/HCP as they are needed. The Applicant has committed to provide funding adequate to cover expected O&M costs and to secure this funding through provision of an appropriate surety bond, letter of credit, or other acceptable financial mechanism. Initially, LIC will provide funding and this will be guaranteed by LIC until such time as the property owners association assumes responsibility for O&M and funding for the those activities. The property owners association, through recorded deed restrictions, will have the responsibility for O&M of the Conservation Area and the authority to levy annual assessments for funding in perpetuity. LIC or its successor management entity will notify the Service if LIC's, or its successor management entities funding resources have materially changed, including a discussion of the nature of the change. The budget provided herein is a preliminary attempt to estimate costs associated with managing the conservation area. The final budget will ultimately be negotiated between LIC and the Management entity and could vary from that provided. The Service will review and approve the final budget.

4. The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

Taken as a whole, the direct, indirect, and cumulative impacts of the proposed action will not appreciably diminish the likelihood of survival and recovery of the GCWA in the wild. The population of the GCWA in 1990 was estimated to be 13,800 pairs [USFWS 1992]. Breeding season habitat is present in 36 counties in Texas and likely exceeds 834,869 acres (338,000 hectares), according to the 1992 USFWS Recovery Plan. The loss of habitat associated with this HCP will not have a material, negative impact on the prospects for survival and recovery of the GCWA, and the 760 acres of preservation of habitat under the HCP adequately compensates for habitat loss and provides an important benefit to potential recovery.

5. The HCP includes all measures that the Service required as being necessary or appropriate for purposes of the plan. The Applicant developed the HCP in coordination with the Service and included all conservation measures required by the Service.

7.0 AMENDMENT PROCEDURE

It is necessary to establish a procedure whereby the Section 10(a)(1)(B) permit and its associated Implementation Agreement can be amended. However, it is important that the cumulative effect of the amendments will not jeopardize any federally listed species or other rare species. Amendments must be evaluated based on their effect on the habitat as a whole. The Service must be consulted and agree on all proposed amendments. The following sections outline the types of proposed amendments and the applicable amendment procedures.

7.1 Amendments to Development Plans

Without conceding liability under the ESA and considering the above, the Applicant concludes that any change in the development plan that does not affect the size or configuration of the Development Area and the conservation area cannot pose any threat of an additional amount of take to the GCWA. This recognizes, logically and scientifically, that the entire development site is mitigated for, therefore, any change within the development envelope as shown in Figure 7 (alt 1 figure) would not constitute additional take of the GCWA. Further, the Applicant concludes that change within the development envelope also would not result in additional adverse impact on the conservation lands or any other offsite area of GCWA habitat that are not already accounted for in the mitigation plan. Therefore, LIC believes, and has determined, no amendment of the permit should be or could be required due to any amendment of the development plan within those areas identified as 'development' in the community plan (Figure 7-alt one).

7.2 Minor Amendments to HCP

Minor amendments involve routine administrative revisions or changes to the O&M program and do not diminish the level or means of avoidance, minimization, and/or mitigation. Such minor amendments include corrections in land ownership, minor revisions to surveys, property descriptions, monitoring or reporting protocols, and minor changes in the boundaries of the Conservation Area that result in no net loss of mitigation and do not otherwise alter the effectiveness of the EA/HCP. Such minor amendments do not alter the terms of the Permit. Upon written request of LIC, the Service is authorized to approve minor amendments to this EA/HCP, if the amendments do not conflict with the primary purpose of the EA/HCP.

7.3 All Other Amendments

All other amendments to the permit, HCP, Implementing Agreement, and supporting agreements, except as described in Section 6.10.2, will be considered an amendment to the section 10(a)(1)(B) permit, subject to any other procedural requirements of federal law or regulation which may be applicable to the amendments of such a permit.

8.0 DURATION

This HCP is written in anticipation of issuance of an ESA Section 10(a)(1)(B) permit for a period of 30 years. Thirty years is defined for the permit period due to the long-term build-out plan and the long-term occupancy of the Property for the desired purposes.

REFERENCES

- aci consulting. 2002a. Golden-Cheeked Warbler Habitat Evaluation for the Evans Road Tract, Bexar County, Texas. p 10. Austin: aci consulting.
- aci consulting. 2002b. Golden-cheeked Warbler Censusing Survey for the Carabetta Tract, Bexar County, Texas. p 17. Austin: aci consulting.
- Air Improvement Resources Committee. 2002. "The Clean Air Plan for the San Antonio Metropolitan Statistical Area." Submitted to the Environmental Protection Agency Region 6.
- Alamo Area Council of Governments. 2004. "Attainment Demonstration for the San Antonio Early Action Compact Region: Proposed Local Revision to the State Implementation Plan." Submitted to the Texas Commission on Environmental Quality.
- Alldredge, M.W., J.S. Hatfield, D.D. Diamond, and C.D. True. 2002. Population Viability Analysis of the Golden-cheeked Warbler.
- American Forests. 2003. Urban Ecosystems Analysis Phase 2: Data for Decision Making. p 11. San Antonio: American Forests.
- Arnold, Keith, Cade L. Coldren, and Mark L. Fink. 1996. *The Interactions Between Avian Predators and Golden-cheeked Warblers in Travis County, Texas*. Prepared for Texas Transportation Institute.
- Ashworth, John B. 1983. Groundwater Availability of the Lower Cretaceous Formations in the Hill Country of South-Central Texas. Report 273. Texas Department of Water Resources.
- Bexar County Infrastructure Services Divisions Public Works Department. 2004. Bexar County Proposition 2 Road and Bridge Improvements Status Report as of October 28, 2004. Bexar County: Bexar County Infrastructure Services Divisions Public Works Department.
- Campbell, Linda. 1995. Endangered and Threatened Animals of Texas: Their Life History and Management. Austin: Texas Parks and Wildlife Press.
- City of San Antonio, Planning Department. 2002. www.sanantonio.gov/planning/pdf/GIS/demo_info/1960_2050.pdf
- Edwards Aquifer Authority. 2003. *Hydrogeologic Data Report for 2002*. p 134. Edwards Aquifer Authority.

- Edwards Underground Water District. 1995. Edwards / Glen Rose Hydrologic Communication. Report 95-03. p 38. San Antonio: Edwards Underground Water District.
- Fischer, R.A., and Guilfoyle, M.P. 2001. Recommendations for Long-Term Monitoring of the Endangered Golden-Cheeked Warbler on Camp Bullis, TX. Vicksburg: U.S. Engineer Research and Development Center, Conservation Assistance Program, Final Report.
- George, W.O. 1947. Geology and Ground-Water Resources of Comal County, Texas. M059, p 142. Texas Board of Water Engineers.
- George, W.O., 1952, *Geology and Ground-Water Resources of Coal County, Texas.* U.S. Geologic Survey Water-Supply Paper 1138, p 126.
- Horizon Environmental Services, Inc. July 2004. Results of the federally listed endangered golden-cheeked warbler survey on the southern potion of Wolverton Ranch. San Antonio: Horizon Environmental Services, Inc.
- Horizon Environmental Services, Inc. May 1995. Results of the federally listed endangered golden-cheeked warbler survey on Evans Road Tract in Bexar County, Texas. San Antonio: Horizon Environmental Services, Inc.
- Horizon Environmental Services, Inc. July 1997. Results of the federally listed endangered golden-cheeked warbler survey on the Evans Road Tract in Bexar County, Texas. San Antonio: Horizon Environmental Services, Inc.
- Horizon Environmental Services, Inc. May 1998. Results of the federally listed endangered golden-cheeked warbler survey on the Evans Road Tract in Bexar County, Texas. San Antonio: Horizon Environmental Services, Inc.
- Horizon Environmental Services, Inc. May 1999. Results of the federally listed endangered golden-cheeked warbler survey on Evans Road Tract in Bexar County, Texas. San Antonio: Horizon Environmental Services, Inc.
- Longley, Glenn. 1986. The Biota of the Edwards Aquifer and the Implications for Paleozoogeography. In The Balcones Escarpment. Abbott, Patrick L, and Woodruff, C.M., eds. pp. 51-54. San Antonio: Geological Society of America.
- Metcalf and Eddy, Inc. 1979. Alternatives: Edwards Aquifer Study Phase Two, Vol. II. Metcalf and Eddy, Inc

- Mancini, John. Director, National Urban Runoff Program Study Presentation City of Austin Council Work Sessions transcripts, February 13, 14, and 16, 1984.
- Mike Warton and Associates. 2000. Investigation and Documentation of Karst Feature No. T 31 Located in the Creek-bed of the 'Elm Waterhole' Drainage way of the 'Evans' Road Site Property Prospectus. p 5. San Antonio: Mike Warton and Associates.
- Mike Warton and Associates. 2001. Observation and Recommendations for New Karst Features of the 'Evans' Road Land Tract. p 5. San Antonio: Mike Warton and Associates.
- Mike Warton and Associates. 2001. Investigation of Three Site-Specific Karst Features (Phases 2 & 3) of the 'Evans' Road Land Tract. p 4. San Antonio: Mike Warton and Associates.
- Pape Dawson Engineers, Inc. 2003. Lumbermen's Investment Corporation Property Summary of Karst Feature Evaluations. p 7. Pape Dawson Engineers, Inc.
- Pape Dawson Engineers, Inc. 2004. Cumulative Impact Report. Pape Dawson Engineers, Inc.
- PBS&J. 2004. *Karst Feature Evaluation of Feature T* 1. p 4. PBS&J.
- San Antonio-Bexar County Metropolitan Planning Organization. 1999. *Mobility 2025 Metropolitan Transportation Plan*. San Antonio: San Antonio-Bexar County Metropolitan Planning Organization.
- Schultz, Alvin. 2003. Trinity Aquifer Freshwater/Saline-Water Interface (Bad-Water Line) And Its Relationship to Trinity and Edwards Inter-Formation Flow. Bexar County: Presentation at the November 12, 2003 meeting of the South Texas Geologic Society.
- Small, T. 1986. Hydrogeologic Sections of the Edwards Aquifer and its Confining Units in the San Antonio Area, Texas. Water-Resources Investigations Report 85-4259, 52. U.S. Geological Survey.
- Stein, W.G. and Ozuna, G.B. 1995. Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Recharge Zonety. Water Resources Investigations 95-4030. U.S. Geological Survey.
- Texas Commission on Environmental Quality. 1999. Technical Guidance Manual RG-348.

- Texas Commission on Environmental Quality. 2004. "Air Quality: San Antonio Near Non-Attainment Area." http://www.tnrcc.state.tx.us/oprd/sips/sipsa.html > Accessed 2004.
- Texas Natural Resource Conservation Commission. 1999. Edwards Aquifer Recharge Zone Map, Bulverde Quadrangle, TNRCC, San Antonio, Texas.
- Texas Parks and Wildlife Department. 2002. Karst Management and Maintenance for Government Canyon State Natural Area. p 18. Texas Parks and Wildlife Department.
- USACE. 1987. Environmental Laboratory. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.
- U.S. Department of Agriculture, Soil Conservation Service. 1991. "Soil Survey of Bexar County, Texas."
- U.S. Fish and Wildlife Service. 1992. Golden-cheeked Warbler (Dendroica chrysoparia) Recovery Plan. Albuquerque, New Mexico. 88 pp.
- U.S. Geologic Survey. 7.5 Minute Topographical Map, Bulverde Quadrangle.
- Veni, G., & Associates. 1994. Geologic controls on cave development and the distribution of endemic cave fauna in the San Antonio, Texas, region. Section 6 report prepared for the Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service.
- Veni, G. 1997. Geomorphology, Hydrogeology, Geochemistry, and Evolution of the Karstic Lower Glen Rose Aquifer. Texas Speleological Survey Monographs. p 409.